Residual and recurrent varicose veins

Clinical case

Female patient, 57 years old presented with symptomatic varicose veins in the right lower limb. She noticed the varicocities over 30 years ago.

Signs and symptoms
- Swelling
- Burning sensation
- Itching
- Heavyness

The veins are larger and the symptoms are worse at the end of the day. She gets relief with limb elevation. The left lower limb is asymptomatic with spider and reticular veins that do not bother her. She had 2 children with normal pregnancies and delivery. Her mother had varicose veins and skin changes. The right limb developed symptoms gradually after the second pregnancy. She had SFJ ligation and phlebectomies 12 years ago. The patient remained asymptomatic for a few years but over time her veins became larger. She started developing new symptoms 7 years ago that are far more intense now. Because of the worsening of her symptoms she went to a vascular specialist. She was given compression stockings but she could not tolerate them well. She felt better with the stockings, however, there was no change in her limb after 3 months. No other pertinent history, surgeries or medications. The arterial exam was normal and she had no mobility problems.

Venous ultrasound was ordered

Multiple varicose veins connect with the SFJ stump and CFV. Very tortuous course with many small channels of flow and larger veins anterior, superior and medial to CFV.

When reflux is induced with release of a clear and palpable cord. The Valsalva maneuver is not needed. However, when the former is negative then the latter is performed.

Veins within the lymph nodes are tortuous and dilated. They are connected with incompetent tributaries of the GSV and AASV. Other connections may occur through the CFV, PV and tributaries extending from pelvic veins. The refluxing lymphovenous network are more often seen after SFJ ligation with or without GSV stripping but can also be found without any previous procedure.

What most likely has happened?
- Development of new varicose veins
- Residual varicose veins from incomplete treatment
- Neovascularization due to SFJ ligation
- Neovascularization, residual and recurrent disease

Neovascularization, residual and recurrent disease

The GSV diameter at the proximal non-refluxing segment measures 3.6mm while the incompetent segment below has a larger diameter of 6.8mm. The larger the GSV diameter the higher the chance for reflux. However, many patients with normal size or even small diameter GSV may have reflux. Therefore, diameter should not be used to determine reflux.

GSV is enlarged posterior to the valve. The valve is frozen and does not move. Focal dilations are segmental GSV eccentric dilatation that connects with many calf varicose veins. The GSV is not seen from the knee to the lower calf. This is segmental GSV aplasia, which is often seen in the thigh and calf segments. It is easy to confuse the accessory vein with the GSV. The accessory vein in this patient was outside the saphenous canal and run medial to GSV.

Accessory vein in the calf is 6mm below the skin.

High velocity reflux with long duration >5s
- Thermal ablation is performed for veins that are ≥4mm from the skin in order to avoid skin burns
- Induration
- Feeling a palpable cord

Neovascularization, residual and recurrent disease

GSV has a small diameter. SFJ and thigh extension are dilated and have reflux.

The small “normal” GSV segment in the upper thigh is usually treated together with the refluxing segment below.

How this patient should be treated?
- Conservative treatment
- Phlebectomies
- Gastrointestinal and phlebectomy
- Sclerotherapy
- Modified stripping and phlebectomy

Treatment plan
- Thermal ablation of the GSV and accessory saphenous vein
- Multiple phlebectomies for the tributaries
- Ultrasound-guided foam sclerotherapy for the neovascularization

Follow-up
- Phlebectomies of two residual tributaries at 1 month Ultrasound-guided foam sclerotherapy at 1 Band 23 months at 36 months she was asymptomatic with a few reticular and spider veins.